

Office of the Legislative Auditor



State of Montana

Report to the Legislature

April 1992

Performance Audit Report

Photocopy Machine Procurement Department of Administration

This report contains recommendations for improving state procurement of photocopiers. The recommendations include:

- ▶ Expanding photocopier contracts to additional cities.
- ▶ Evaluating photocopier contract coordination options.
- ▶ Designing a cost and needs analysis procedure to help agencies purchase the most cost-effective copiers to meet their needs.

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April 1992

The Legislative Audit Committee
of the Montana State Legislature:

This is our performance audit of state photocopy machine procurement. The report contains recommendations for improvements and cost savings regarding procurement of state photocopy machines. Responses from the Department of Administration and the Commissioner of Higher Education are contained at the end of the report.

We wish to express our appreciation to Department of Administration officials, Publications and Graphics Bureau staff, and Purchasing Bureau staff, as well as staff of the Montana University System for their cooperation and assistance.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Scott A. Seacat".
Scott A. Seacat
Legislative Auditor

Office of the Legislative Auditor

Performance Audit

Photocopy Machine Procurement

Department of Administration

Members of the audit staff involved in this audit were Jim Nelson and Pamela Boggs. Additional information on the audit can be obtained by contacting the Office of the Legislative Auditor at (406) 444-3122.

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**Commissioner of Higher
Education**

John Hutchinson, Commissioner

Report Summary

Introduction

The Legislative Audit Committee requested a performance audit of state photocopy machine procurement methods. This audit reviewed the processes agencies use to acquire photocopiers through the Procurement and Printing Division at the Department of Administration. We evaluated the three methods available for procuring photocopiers: cost per copy (CPC) contract, multi-vendor term contract, and copiers acquired by competitive bids. We also determined if recommendations from our 1987 audit of the Photocopy Pool had been implemented. The following sections summarize the audit results.

1987 Audit Results

Our 1987 audit of the Publications and Graphics Bureau Photocopy Pool evaluated pool costs and if the pool copiers met agency needs. The audit resulted in six recommendations which have all been implemented including a Cost Per Copy contract for Helena-area agencies. The contract resulted in initial cost savings of approximately \$120,000 per year. We estimate a \$250,000 annual savings when current usage is compared to the 1987 pre-term contract cost per copy.

Cost Per Copy (CPC) Contract

In comparing photocopier purchasing methods, we found the CPC term contract used by the Photocopy Pool generally had the lowest cost per copy. The CPC contract has been successful in Helena, saving money as well as providing photocopier expertise and coordination for state agencies. The CPC contract is structured much like a rental agreement so agencies are not required to make an initial expenditure to purchase their copiers. The CPC contract provides easier budgeting for agencies since they pay monthly only for the number of copies made.

We conducted a cost analysis using data from state agencies in three cities. The cities chosen appear to have enough state copiers to justify a CPC contract. We estimated over \$200,000 annual savings by comparing historical copier costs to current CPC contract copier costs. Most of the savings identified were from university photocopy machines. We spoke with University officials and they expressed interest in CPC contracts. The department could use a Request For Proposal to negotiate

Report Summary

additional contracts that best meet the needs of the agencies in each city. We recommend the Department of Administration work with the Montana University System to establish photocopier cost per copy contracts in Bozeman, Missoula, and Billings, if cost effective.

CPC Contract Coordination

The Photocopy Pool coordinator administers the CPC contract for Helena-area agencies. The coordinator provides expertise to ensure agencies obtain photocopy machines which meet agency requirements. The coordinator bills agencies after collecting monthly meter readings and handles calls from the agencies when they have copier problems. There is a cost for having the coordinator conduct these duties. Currently these agencies pay an additional administrative fee between 5 - 11 percent of the cost per copy, to cover administrative costs. It is possible for the vendors to assume some administrative duties which would keep administrative expenses to a minimum and maximize savings. The department should evaluate contract options to determine how to best meet the needs of agencies in each city. If it is more cost effective to have vendors perform some administrative functions, then it should be possible for persons in existing positions to handle remaining functions. We recommend the Department of Administration evaluate options in contract coordination when establishing future CPC contracts.

Multi-Vendor Term Contract

Our comparison of the three purchasing methods generally indicated the second most cost-effective method was the multi-vendor term contract. Agencies in areas without enough copiers to benefit from a CPC contract might benefit from the multi-vendor term contract. It appears feasible to include Kalispell in the contract since there are multiple vendors and an adequate number of state copiers in Kalispell. Some state agencies in surrounding smaller communities could use the contract as well. The department should determine vendor interest in bidding on a multi-vendor term contract for Kalispell and if the bid prices are advantageous to the state. We recommend the Department of Administration expand the multi-vendor term contract to additional communities, where cost-effective.

Agencies Should Analyze Costs

During our analysis, we noted many agencies not in the Photocopy Pool, procure photocopiers without adequate regard to projected volume of copies. Consequently, the copiers are often too small and sometimes too large, resulting in a higher cost per copy. Agencies need a method of conducting an analysis in order to make an informed decision and choose the most cost-effective copier to meet their needs. For example, the current multi-vendor term contract has over 100 different machines with a wide range of prices. Agencies buying off the contract can select any machine on the contract. We found many agencies purchased higher priced copiers on the contract. The department should design a cost and needs analysis procedure to help agencies identify the most cost-effective copier that will meet their needs. We believe agencies would cooperate with the department since use of a cost and needs analysis could increase efficiency and result in agency cost savings. We recommend the Department of Administration assist state agencies in procurement of photocopiers by developing a cost and needs analysis and providing state agency personnel instructions in the use of the analysis.

Chapter I

Introduction

Introduction

At the request of the Legislative Audit Committee, we conducted a limited scope performance audit of state photocopy machine procurement methods. This audit determined how agencies acquire photocopiers and whether an alternative purchasing method for photocopiers would be more cost effective.

Audit Objectives

Specific objectives of the audit included:

1. To follow up on our 1987 Photocopy Pool audit (87P-33) to determine if recommendations were implemented and to evaluate the cost savings.
2. To gather an inventory listing of photocopiers for all state agencies and to determine how much the state spends per year on photocopies (to the extent possible).
3. To determine how agencies select machines to fit their needs and to evaluate the need for approval or coordination of photocopier procurement.
4. To determine the most cost-effective method of photocopy procurement for agencies outside the state's Photocopy Pool.
5. To determine compliance with applicable statutory and administrative rule requirements related to photocopier purchases.

Audit Scope and Methodology

The audit was conducted in accordance with governmental auditing standards for performance audits. The audit focused on determining the most cost-effective method of photocopier procurement.

We interviewed agency personnel and reviewed files at the Purchasing Bureau and the Publications and Graphics Bureau. Both bureaus are located in Helena under the Procurement and Printing Division within the Department of Administration.

We compiled photocopier costs and related data to calculate average costs per copy. (Cost per copy is a generally accepted

Chapter I

Introduction

method to compare photocopier costs.) We did not include paper costs in our comparison. The price of paper is the same regardless of the method used for photocopier procurement. Paper is purchased separately by the agencies. We did not calculate salvage value of purchased copiers. Salvage values vary and are often low. In addition, only salvage values from items purchased using proprietary, earmarked, auxiliary or other revolving funds are returned to the agencies after the first \$200 is subtracted for a handling fee.

We used a three-year analysis to compare current agency photocopier costs under various purchasing methods. We used a three-year time period because the cost per copy (CPC) contract replaces the copiers every three years and because most copiers usually have useful lives between three and five years. Machines kept beyond their useful lives incur increased breakdowns and maintenance costs. In addition, if machines are replaced every three years it is possible to take advantage of technological advances in the photocopier industry which can result in more efficiency. A recent advancement is known as "book copy." Separate copies of both the left and right pages can be obtained in a single step.

We attempted to gather statewide information on the number and location of state government copiers and the exact costs associated with the copiers. We extracted some data from the state's Property Accountability Management System (PAMS) for all agencies. The system reports the state has \$2.5 million worth of owned photocopier equipment, as of April 1991. However, we determined several agencies with copiers had no record of photocopiers on PAMS. We noted other agencies miscoded records on PAMS, or did not keep their listing up to date. We also found inconsistencies in how agencies code photocopier costs to the Statewide Budgeting and Accounting System (SBAS).

Because of inconsistent or missing information on PAMS and SBAS, we were unable to readily compile a statewide inventory of photocopiers or compile costs associated with state-owned copiers. Complete information was unavailable without going to each agency to compile the information. Due to resource

Chapter I Introduction

limitations we did not go to each agency. Rather, we sent a questionnaire to state agencies in nine cities to gather some of this information. We asked for the following:

1. cost of procurement;
2. annual maintenance and supply costs;
3. annual number of copies made;
4. annual number of breakdowns;
5. average length of wait for service;
6. procurement method and date of acquisition;
7. when they plan to replace their photocopy machine;
8. whether the machine meets their needs; and
9. what criteria is used to determine their copier needs.

During the audit we contacted a sample of agencies currently using the Photocopy Pool to determine agency satisfaction with the pool contract and the administration of the contract by the Publications and Graphics Bureau (P & G).

We did not review general and application controls over data processing system at P & G. The bureau uses a computer to compile limited information on number of copies, number of machines, cost, and average cost per copy for the Photocopy Pool. The billing is not computerized.

Finally, other states, businesses, manufacturers, and vendors were contacted to collect information on photocopier specifications and photocopier purchasing methods.

Compliance

As part of our audit, we reviewed agency compliance with laws and administrative rules related to the procurement of photocopiers. We identified noncompliance with inventory requirements as well as direct agency purchases of photocopiers which are a controlled item.

Chapter I

Introduction

Inaccurate PAMS Records

The state maintains a Property Accountability Management System (PAMS). This system is used by agencies to manage and account for fixed assets. According to state policy, agencies should record equipment with a unit cost of \$1,000 or more on PAMS, or may keep a separate listing for federal requirements. We found 40 state agencies record some photocopier information on PAMS. Of those 40, we found noncompliance by 17 agencies and 7 units in the Montana University System not correctly recording owned photocopiers on PAMS. Often these agencies or units have other types of office machines recorded under the photocopier area. According to the Montana Operations Manual (MOM) 2-1700.22, duties of the agencies' property coordinator include analyzing PAMS reports and correcting data.

Direct Purchases of Controlled Items

Our review of questionnaire data indicated some agencies directly purchased photocopiers. Photocopiers are controlled items and must be acquired through the P & G Photocopy Pool, the multi-vendor term contract, or through the individual bid process with the Purchasing Bureau. These potential compliance issues will be further evaluated on site during our financial-compliance audits of these agencies.

1987 Audit Results

Our 1987 audit of the P & G Photocopy Pool evaluated the pool costs and if the pool copiers met agency needs. At that time, we also researched other procurement methods for photocopy equipment and evaluated savings available from these methods. The audit resulted in six recommendations.

The 1987 audit recommendations for the Photocopy Pool have all been implemented including establishment of a term contract in late 1987. The contract resulted in initial cost savings of approximately \$120,000 per year. The contract resulted in even higher savings by 1991 since the number of copiers and copies increased and the cost per copy decreased. The number of agencies participating in the pool has increased as well. We estimate a \$250,000 annual savings when current usage is compared to the 1987 pre-term contract cost per copy.

Chapter II

Background

Department of Administration Authority

According to section 18-4-221, MCA, the Department of Administration shall "procure or supervise the procurement of all supplies and services needed by the state. . ." MOM 1.0700.00 defines the purpose of the Procurement and Printing Division within the Department of Administration is "to develop and administer a fair, legal, cost-effective, professional program." Together these sections give the department overall responsibility to use the most cost-effective methods for procurement of photocopiers.

Section 2-17-301(1), MCA, states "the department of administration shall maintain and supervise any central . . . copying facilities for state agencies in the capitol area." The Publications and Graphics Bureau currently operates the Photocopy Pool for Helena-area agencies under this statutory authority.

Purchasing Methods Prior to Term Contract

During the mid-1970s, the General Services Division maintained a Photocopy Pool for Helena-area agencies. Agencies were required to obtain approval for photocopier purchases from the General Services Division. During 1979, the Publications and Graphics Division was created and the operation of the Photocopy Pool transferred from the General Services Division to P & G.

Prior to 1987, Helena agencies could obtain photocopiers through one of two methods: an agency could buy or lease its own copier through the Purchasing Bureau or elect to become part of the Photocopy Pool. Agencies outside of Helena were required to purchase their copiers through the Purchasing Bureau's quarterly requisition time schedule (RTS). The RTS is a listing of dates on which requisitions for various commonly purchased commodities are due to the Purchasing Bureau. The requisition schedule allows the state to competitively bid volume purchases.

Chapter II

Background

Use of Term Contract By Helena Agencies

The 1987 cost per copy (CPC) term contract provided Helena-area agencies with a new option for photocopy services. The agencies pay only for the cost of each copy, rather than purchasing the machines.

The contract allows the state to competitively bid the machines in quantity to obtain even greater savings and provides new machines to the agencies every three years. The contract specifies a minimum number of copiers that must be placed but it can be expanded at any time. The term contract resulted in approximately \$120,000 per year savings. The contract also replaced the photocopier RTS for Helena-area agencies.

Photocopy Pool

The Photocopy Pool is an option for photocopier procurement available only to Helena-area agencies. The Photocopy Pool is administered by P & G and is managed by the Photocopy Pool coordinator. The coordinator analyzes agency photocopier needs and tries to place the most cost-effective photocopy machine from its pool of machines in each agency.

The use of the Photocopy Pool has increased since 1987, as illustrated in Table 1. The number of photocopiers and the number of copies made have both increased. The number of agencies participating in the pool has also increased. The average cost per copy has decreased since the implementation of the term contract in 1987.

Chapter II Background

Table 1

Yearly Photocopy Pool Agency Usage

Fiscal Year	Average # of Copiers	Annual # of Copies (Millions)	Agency Annual Costs	Average Cost Per Copy
1986-87	113	12.00	\$528,000	\$.0440*
1987-88	122	15.26	\$549,124	\$.0360
1988-89	140	20.65	\$702,328	\$.0340
1989-90	150	21.98	\$713,767	\$.0325
1990-91	160	21.96	\$715,629	\$.0326

* pre-contract average cost per copy

Source: Compiled by the Office of the Legislative Auditor from Photocopy Pool records.

**Photocopy Pool Produces
21.9 Million Copies Per
Year**

The Photocopy Pool consists of approximately 119 machines on term contract and 41 photocopiers owned by P & G. The owned machines are normally high volume machines and are often placed in locations for use by more than one agency. During fiscal year 1990-91, 12 million copies were made on term contract copiers and approximately 9.9 million copies were made on P & G-owned photocopiers. Costs for P & G-owned copiers include a 10 percent mark-up to cover administrative overhead required of owned copiers. These copier costs vary depending whether the copier is already paid for and depreciated out. Agencies using the CPC term contract machines pay a variable administrative fee between 5 percent and 11 percent, depending on the volume level of the machine. The fee covers P & G's costs to administer the term contract and the pool.

Rates Vary by Volume

The costs paid by agencies using term contract machines vary depending on the volume level of the copier. The term contract has minimum monthly volume levels with a minimum monthly charge for each level of copier. Table 2 shows the levels and corresponding rates for the term contract copiers for March 1991 through March 1994.

Chapter II

Background

Table 2

Photocopy Pool Rates By Volume Level
Term Contract Copiers

Volume Level	Minimum Monthly Volume	Cost Per Copy	Minimum Monthly Fee
1	2,000	\$.040	\$ 80
2	5,000	\$.028	\$140
3	8,000	\$.026	\$208
4	17,000	\$.018	\$306
5	22,000	\$.017	\$374
6	32,000	\$.016	\$512

Source: Compiled by the Office of the Legislative Auditor from Photocopy Pool records.

Purchasing Bureau

The Purchasing Bureau has overall responsibility for copiers obtained outside the Photocopy Pool. Currently, state agencies in six cities in Montana can choose photocopiers from a multi-vendor term contract established by the Purchasing Bureau. In addition, copiers can be acquired by individual competitive bid through the bureau.

Multi-Vendor Term Contract

The multi-vendor term contract was established for six cities: Helena, Great Falls, Missoula, Bozeman, Butte, and Billings. Any vendor that submits a bid following the required specifications is placed on the contract. The multi-vendor contract has six volume levels of photocopiers and the agencies choose the copier model that meets their volume needs. The contract offers both purchase and lease/purchase payment options for over 100 models of copiers from 23 vendors. The agencies in cities covered by the contract select copiers from the contract and then place their order by submitting a requisition to the Purchasing Bureau. The term contract process simplified purchasing for the agencies, vendors, and the Purchasing Bureau since individual competitive bids are not required.

Competitive Bid

The competitive bid process was the primary acquisition method for photocopiers prior to the CPC contract in 1987 and the multi-vendor term contract in 1989. The individual competitive bid process through the Purchasing Bureau in Helena is still used by agencies in locations without access to the term contracts. Agencies in cities with contracts can also use the competitive bid process when machines available on contract do not meet their needs. The agency determines the copier specifications needed and submits those to the bureau. The bureau reviews the specifications and issues an Invitation for Bid (IFB) to prospective vendors and then selects the lowest bidder meeting those specifications.

Photocopier Maintenance

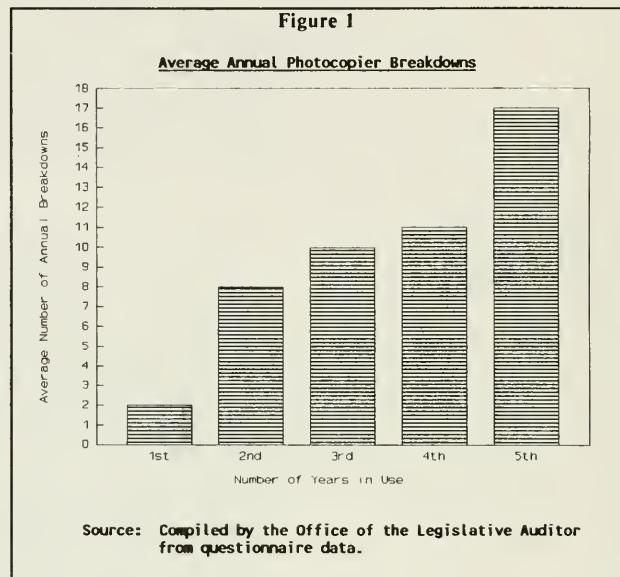
Photocopiers are high maintenance machines. We found frequent service is a common perception of the agencies who responded to our questionnaire. Based on our questionnaire data, it appears maintenance costs increase as the machines age. Maintenance contracts can be acquired as part of the machine purchase or as a separate contract. Some agencies choose to pay maintenance costs on an as-needed basis rather than through a maintenance contract.

Under the Photocopy Pool cost per copy contract, the cost of all maintenance is included in the monthly charge. Under the multi-vendor term contract, the contractor must provide 3 months of warranty service and the option of maintenance service for 36 months from the equipment's delivery/acceptance date. Photocopiers purchased without a maintenance contract as well as those photocopiers whose maintenance has lapsed, are not eligible for future maintenance service coverage under this contract. These agencies pay for maintenance as needed. Agencies acquiring photocopiers through competitive bid may specify whether or not to include maintenance coverage in the purchase price.

Chapter II Background

Photocopier Breakdowns

We compiled questionnaire data on the number of breakdowns for 244 copiers. The copiers broke down 2,854 times in fiscal year 1990-1991, averaging 12 breakdowns annually. We found the annual average number of copier breakdowns is dependent on the age of the machine.



In the first year a copier breaks down two times on the average. By the second year, the photocopier breaks down an average of eight times a year. The number of breakdowns continues to increase until by the fifth year, the machine breaks down an average of 17 times.

Chapter III

Photocopy Machine Procurement

Introduction

During our audit we analyzed current procurement methods used to acquire photocopiers. We sent a questionnaire to agencies in nine cities to gather cost data and agency opinions. We analyzed the data to ascertain the most cost-effective method of photocopier procurement. We considered both copier costs and expected volume of copies. We excluded copier data not applicable to the comparison. For example, we eliminated agencies with incomplete data on annual volume, acquisition costs, maintenance costs, or supply costs. We also excluded copiers with unique accessories not available on the term contracts, such as extremely high volume copiers and old copiers no longer manufactured.

This chapter presents recommendations for improvements and cost savings regarding state photocopier procurement.

Methods of Purchase

We evaluated the three methods available for procuring photocopiers: the cost per copy (CPC) contract, the multi-vendor term contract and photocopiers acquired by competitive bids.

In comparing photocopier purchasing methods, we found the CPC term contract used by the Photocopy Pool generally had the lowest cost per copy.

Cost Per Copy (CPC) Contract

P & G initially set up the CPC contract using a Request For Proposal (RFP). The RFP allowed vendors to bid on each volume level specified in the contract. The RFP initially established four levels of copiers corresponding to the minimum number of monthly copies agencies expect to produce. The most recent CPC contract was expanded to six levels of copiers. The vendor with the lowest cost per copy for each copier level meeting bid specifications was awarded the contract. The specifications included minimum copy speed, copier accessories, and service within eight hours of being contacted by P & G.

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Photocopy Machine Procurement

Cost Analysis

We conducted a cost analysis for photocopiers in Billings, Bozeman, and Missoula. Each city appears to have enough copiers to justify a CPC contract.

Our analysis of the copiers in these areas indicated many were operating at higher costs than the Helena-area CPC contract. We determined the costs of these copiers using the CPC contract price. However, pricing in Helena may not reflect costs available in other areas, due to the large volume of copiers in Helena-area state agencies. Therefore, we also determined the costs at 20 percent over the Helena bid cost per copy.

We used a three-year time period in comparing historical agency photocopy equipment costs to the 1991 CPC contract photocopier costs for 149 copiers. The three year cost and average three year cost per copy were calculated using the following formulas:

$$\begin{aligned} \text{3 Year Cost} &= \text{acquisition cost} + ((\text{maintenance} + \text{supply costs}) * 3) \\ \text{3 Year Avg. CPC} &= \text{3 year cost} / (\text{annual volume} * 3) \end{aligned}$$

We did not include salvage value of purchased copiers since the values are usually low and only special funded agencies retain the salvage value.

We found 106 of the 149 purchased copiers were analyzed operating at costs higher than the current CPC contract. Even when using the rate at 20 percent over the bid CPC, 90 of the 149 copiers operated at a higher cost. The difference between current costs and CPC costs is the estimated savings. The estimated savings are based only on those copiers analyzed that showed a savings on the CPC contract and assumes agencies when given lower cost options would choose the CPC contract. The agencies could switch over to a CPC contract as needed when it is time to replace a copier. The estimated savings from a CPC contract are shown in Tables 3 and 4.

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Photocopy Machine Procurement

Table 3

Three Year Cost and CPC with Photocopy Pool Rates

106 Copiers	Current Costs	-	CPC Costs	=	Three Year Savings
3 Year Cost	\$1,592,300	-	\$903,162	=	\$689,138
3 Year Avg. CPC	\$.03851	-	\$.02184	=	\$.01667

Source: Compiled by the Office of the Legislative Auditor and P & G staff from questionnaire data.

Table 4

Three Year Cost and CPC at 20 Percent Over Bid CPC

90 Copiers	Current Costs	-	CPC Costs	=	Three Year Savings
3 Year Cost	\$1,452,446	-	\$839,756	=	\$612,690
3 Year Avg. CPC	\$.03851	-	\$.02385	=	\$.01466

Source: Compiled by the Office of the Legislative Auditor and P & G staff from questionnaire data.

**Savings Should Exceed
\$200,000 per Year**

If all the copiers showing a savings were replaced with CPC contract copiers, we estimate savings should exceed \$200,000 per year. We were only able to analyze 149 state copiers in Billings, Bozeman, and Missoula because of incomplete questionnaire information. We estimate a total of 262 state copiers in these three cities which could result in an even higher savings.

Approximately one-third of the copiers we analyzed had a lower cost per copy than available on the CPC contract. Some of these low cost copiers are low volume copiers that would not be suitable for a CPC contract since the minimum volume on the contract is 2,000 copies per month with a minimum charge of \$80

Chapter III

Photocopy Machine Procurement

per month. Some low volume copiers can be leased for less than this minimum rate. At the other extreme, some high volume copiers have a lower cost per copy than available on the CPC contract. We identified some copiers producing over 500,000 copies per year operating at an average cost per copy of \$.0101. The lowest price on the CPC contract is \$.016.

No Acquisition Cost

The acquisition cost for photocopiers in our questionnaire sample totaled \$992,051, for an average purchase price of \$4,769. Since the CPC contract is structured much like a rental agreement, agencies are not required to make an initial expenditure to purchase their copiers. The CPC contract provides easier budgeting for the agencies since they pay monthly only for the number of copies made. Another advantage of the CPC contract is the agencies can upgrade their copiers as needed and they receive a new copier every three years. This allows agencies to keep up with new technology available in the market. Furthermore, replacing the copiers regularly may result in fewer breakdowns as shown in Figure 1 on page 10.

Agencies Interested

Our questionnaire results showed most agencies are interested in a CPC contract, if the contract provides a savings over current costs. Agencies indicated nearly half of the copiers in our questionnaire sample will need to be replaced within the next three years.

Most of the copiers showing potential savings using the CPC contract are in the Montana University System. We spoke with university officials and they expressed an interest in the CPC contract. Montana State University officials and other Bozeman area agencies indicated their willingness to try the contract and it appears the Bozeman area could realize the most savings.

Chapter III

Photocopy Machine Procurement

Request for Proposal Could be Used

Based upon potential savings to the state by expanding the CPC contract, the department should work with the Montana University System to establish CPC contracts in Billings, Bozeman, and Missoula, if cost effective. The CPC contract has been successful in Helena, saving money as well as providing photocopier expertise and coordination for state agencies. A Request For Proposal (RFP) could be used to provide for negotiation among the department, the vendors, and the university units, to evaluate the cost effectiveness of cost per copy contracts in these cities. The RFP process allows greater flexibility to the state by using designated evaluation criteria to establish a contract that best meets the needs of the state.

Recommendation #1

We recommend the Department of Administration work with the Montana University System to establish photocopier cost per copy contracts in Bozeman, Missoula, and Billings, if cost effective.

Multi-Vendor Term Contract

The multi-vendor term contract is set up through an Invitation For Bid through the Purchasing Bureau. Any vendor that submits a bid following the required specifications is included in the contract regardless of cost. The contract is available in six cities. Department of Administration officials like the contract for several reasons. The contract reduces the number of IFB's for copiers from the agencies. Department officials stated the contract has resulted in fewer complaints from the vendors. Department officials indicated the vendors like the contract because it gives them an opportunity to sell their products. The department also said the agencies are satisfied with the contract since they have a wide choice of copiers and options.

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Agencies obtained 158 copiers from the multi-vendor term contract from inception through November 1991. These copiers had a total acquisition cost of approximately \$1.3 million. Individual copier costs ranged from \$1,182 up to \$43,416.

Our comparison of the three purchasing methods generally indicated the second most cost-effective method was the multi-vendor term contract. In a few instances, the multi-vendor term contract copiers had a lower cost per copy than the CPC contract copiers. However, the contract could be improved by expanding the contract to other communities.

Expansion to Other Communities Beneficial

Agencies in areas without enough copiers to benefit from a CPC contract might benefit from the multi-vendor term contract. To determine if more cities could benefit from a multi-vendor term contract, we discussed expansion of the contract with vendors currently on the contract. The vendors indicated additional cities could be added to the contract if there are multiple vendors and enough copiers in the cities. Based on this criteria it appears feasible to include Kalispell in the contract. Some state agencies in the surrounding smaller communities could use the contract as well.

We have discussed expanding the contract with Department of Administration officials. They considered including Havre and Kalispell in the multi-vendor term contract when it was established, but decided not to based on the number of machines in the area. Based on our discussions with vendors currently on the contract, our estimation of the number of copiers in Kalispell, and potential savings to the state, we believe the Department of Administration should reconsider including Kalispell on the contract.

Chapter III **Photocopy Machine Procurement**

Conclusion

The department should determine vendor interest in bidding on a multi-vendor term contract for other communities and if the bid prices are advantageous to the state.

Recommendation #2

We recommend the Department of Administration expand the multi-vendor term contract to other communities if cost-effective.

Coordination of Photocopier Procurement

At the time of our 1987 audit, the Administrative Rules of Montana (ARM) required the department to give its approval before agencies could purchase photocopy equipment. However, the department only required approval of photocopier purchases for the Helena area. Recently, ARM 2.5.202 was changed to eliminate Department of Administration approval of photocopier purchases.

Presently, coordination of photocopier procurement for Helena-area agencies is available through the Photocopy Pool at P & G. The pool coordinator provides expertise to ensure agencies obtain photocopy machines which meet agency requirements regarding size, number, and placement of machines. For copiers acquired through the Purchasing Bureau, the agencies analyze their own needs to determine the number, size, and placement of machines.

CPC Contract Coordination

Under the current CPC contract in Helena, the Photocopy Pool coordinator helps agencies in the pool determine the appropriate volume level of copier on the contract. The agencies send their monthly meter reading to the pool coordinator so the coordinator can calculate charges. P & G bills the agencies, collects their percentage for administrative overhead, and remits the remain-

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ing amount due to the vendor. The agencies call the coordinator for all copier problems. The coordinator manually logs in all calls and calls the vendors for service. At the end of the month, the coordinator compiles a formal trouble call listing. The monthly costs and number of copies are tabulated into year-end totals for each machine and the average cost per copy is calculated at that time.

There is a cost for having the coordinator conduct these duties. Currently the contract prices are increased by 5 percent to 11 percent, depending on the level of photocopier, to cover the administrative expenses of billing and paying for the coordinator.

Limit Duties

Limiting administrative duties related to CPC contracts would keep administrative expenses to a minimum and maximize savings. It is possible for the vendors to assume some of the administrative duties. Manufacturers and vendors indicated they keep a log of copier problems for their own purposes and could provide a copy to the state for review. The vendors directly bill all their private customers and could also individually bill state agencies on the contract.

P & G officials indicated only about two-thirds of the agencies in the pool send in their monthly meter readings and the coordinator has to call the rest of the agencies to complete the billing cycle. Having the vendor bill agencies directly would simplify the process and keep the coordinator from having to track down agencies that fail to submit their meter readings. As a compensating control, since the billing would move from state control to private industry, state agencies could review their monthly meter readings to determine number of copies produced and what charges to expect from the vendor.

Chapter III Photocopy Machine Procurement

Conclusion

Options for CPC contract coordination should be evaluated. Department of Administration officials should work with the Montana University System to determine the contract coordination options which best meet the needs of the university units when establishing new CPC contracts. The department should also evaluate these options when negotiating future CPC contracts in Helena. As part of the process, vendor charges to handle agency billing and to report machine problems could be analyzed. Additional vendor charges could be compared to the costs of having in-town coordination. If it is more cost effective to have vendors perform the billing and problem functions, then it should be possible for persons in existing positions to handle the remaining functions. These remaining functions involve analyzing agencies' copier costs and choosing the appropriate volume level of copier.

Recommendation #3

We recommend the Department of Administration evaluate options in contract coordination when establishing future CPC contracts.

Important to Have Copier to Meet Agency Needs

Under the cost per copy (CPC) contract, agencies do not buy their photocopiers, but rather pay only for the cost of each copy. Copies over the minimum volume are charged at the set cost per copy. If an agency makes less than the minimum monthly volume, the cost per copy is higher, demonstrating the importance of acquiring the appropriate level of copier. The following table illustrates how the cost per copy changes depending on the number of copies made.

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Table 5

Copier Level Cost Comparison

Copies Per Month	Level 4 Copier		Level 5 Copier	
	Monthly Cost	Average CPC	Monthly Cost	Average CPC
15,000	\$306	\$.0204	\$374	\$.0249
17,000*	\$306	\$.0180	\$374	\$.0220
19,500	\$351	\$.0180	\$374	\$.0192
22,000**	\$396	\$.0180	\$374	\$.0170
25,000	\$450	\$.0180	\$425	\$.0170

* minimum monthly volume for level 4 copiers

** minimum monthly volume for level 5 copiers

Source: Compiled by the Office of the Legislative Auditor from Publications and Graphics Bureau records.

Table 5 shows if an agency makes less than the minimum monthly volume then the average cost per copy increases. For example, making 15,000 copies per month on a machine rated at 17,000 copies per month (level 4) raises the average CPC from \$.0180 to \$.0204. If an agency makes significantly more copies than the minimum, it is less expensive to go up to the next level of copier. For example, making 22,000 copies per month on a level 4 copier costs \$396 as compared to \$374 on a level 5 copier.

During our analysis of the questionnaire data we noted many agencies, not in the Photocopy Pool, procure copiers without adequate regard to projected volume. Consequently, the copiers are often too small and sometimes too large resulting in a higher cost per copy. For example, a copier in Bozeman produces approximately 15,000 copies annually at a cost of \$.282 per copy. The costs were high because the machine is designed for a usage level of about 60,000 copies per year. A CPC contract copier at 10,000 copies annually would cost between \$.096 and \$.101 per copy.

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Projected Volume is a Low Priority for Agencies

We asked the agencies in our questionnaire sample to rank in order of importance, the criteria they use to determine their photocopier needs. The criteria does vary considerably between agencies. The overall results show that volume is a low consideration for the agencies when compared to other criteria.

Table 6

Agency Photocopier Needs

Criteria	Rank
Dependable Copier	1
Quality Copies	2
Reliable Service	3
Cost	4
Copy Speed	5
Accessories	6
Projected Volume	7
Brand Name	8

Source: Compiled by the Office of the Legislative Auditor from questionnaire data.

The projected volume is a crucial factor in achieving a low cost per copy because of the relationship to the size and cost of the copier and the amount of maintenance and supplies needed for the volume of copies. The cost per copy increases when the agencies make either significantly more or significantly less copies on a machine than the recommended volume of the copier.

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Agencies Should Analyze Costs

Agencies need a method of conducting their own cost and needs analysis in order to make an informed decision and choose the most cost-effective copier to meet their needs. For example, the current multi-vendor term contract has over 100 different machines and 23 different vendors with a wide range of prices. In Billings, agencies can choose from 62 copiers from 11 different vendors on the contract. The wide variety of copiers on the contract occurs because any vendor meeting the specifications is put on the contract. The prices of the copiers vary based on the volume category and the vendor. For a copier designed to produce a minimum monthly volume of 10,000 copies, the copier prices ranged from \$2,095 to \$6,011. Agencies buying off the contract can select any machine on the contract. We reviewed the 62 copier acquisitions from the 1989-1990 contract for agencies in Missoula and Bozeman. We found many agencies purchased the higher priced copiers from the contract.

Because of the wide variety of copiers and copier options agencies can purchase, the department should design a cost and needs analysis procedure to help agencies identify the most cost effective copiers that will meet their needs. The cost and needs analysis procedure could be used directly by the agencies rather than submitting the analysis to the Department of Administration. This would allow individual agencies procuring photocopiers to make their own evaluation of copier options and prices.

Currently, the department has the Photocopy Pool coordinator calculate costs and assess photocopier needs for Helena-area agencies when they join the pool on the CPC term contract. The analysis would be similar for all agencies comparing photocopiers whether or not on contracts. We believe the agencies would cooperate with the department since use of the analysis could increase efficiency and result in agency cost savings.

Chapter III **Photocopy Machine Procurement**

Conclusion

Based on the analysis of the questionnaire data and the current structure of the multi-vendor term contract, we believe the department should establish a common method of analyzing photocopier needs. The department should also instruct state agencies in the use of the analysis. The end result should be a photocopier meeting agency needs with the lowest cost per copy. The time and cost to the Department of Administration to disperse the information to state agencies would be minimal compared to a more formal approval process.

Recommendation #4

We recommend the Department of Administration assist state agencies in procurement of photocopiers by:

- A. Developing a cost and needs analysis; and**
- B. Providing state agency personnel instructions in the use of the analysis.**

Agency Response

DEPARTMENT OF ADMINISTRATION
DIRECTOR'S OFFICE



STAN STEPHENS, GOVERNOR

MITCHELL BUILDING

STATE OF MONTANA

(406) 444-2032

HELENA, MONTANA 59620

March 24, 1992

26 39

Jim Pellegrini
Deputy Legislative Auditor
Office of the Legislative Auditor
Room 135, State Capitol
Helena, MT 59620

Dear Jim:

We appreciate the opportunity to respond to your performance audit on Photocopy Machine Procurement.

RECOMMENDATION #1

WE RECOMMEND THE DEPARTMENT OF ADMINISTRATION WORK WITH THE UNIVERSITY SYSTEM TO ESTABLISH PHOTOCOPIER COST PER COPY CONTRACTS IN BOZEMAN, MISSOULA, AND BILLINGS, IF COST EFFECTIVE.

RESPONSE

We concur. If the university system wishes to establish photocopier cost per copy contracts in Bozeman, Missoula and Billings, we will work with them to competitively contract for these services. The time table for implementation will depend on the needs of the university system.

RECOMMENDATION #2

WE RECOMMEND THE DEPARTMENT OF ADMINISTRATION EXPAND THE MULTI-VENDOR TERM CONTRACT TO OTHER COMMUNITIES IF COST EFFECTIVE.

RESPONSE

We concur. This has been implemented in our latest contract. We added Kalispell and Havre due to agency and vendor interest.

RECOMMENDATION #3

WE RECOMMEND THE DEPARTMENT OF ADMINISTRATION EVALUATE OPTIONS IN CONTRACT COORDINATION WHEN ESTABLISHING FUTURE CPC CONTRACTS.

Jim Pellegrini
March 24, 1992
Page 2

RESPONSE

We concur. We will review all options for contract coordination prior to requesting future Invitation for Bids for CPC services.

RECOMMENDATION #4

WE RECOMMEND THE DEPARTMENT OF ADMINISTRATION ASSIST STATE AGENCIES IN PROCUREMENT OF PHOTOCOPIERS BY:

- A. DEVELOPING A COST AND NEEDS ANALYSIS; AND
- B. PROVIDING STATE AGENCY PERSONNEL INSTRUCTIONS IN THE USE OF THE ANALYSIS.

RESPONSE

We concur. We will send a cost comparison sheet with instructions to all agencies affected by the multi-vendor term contract for photocopiers by June 30, 1992.

Sincerely,



Bob Marks
Director



THE MONTANA UNIVERSITY SYSTEM

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COMMISSIONER OF HIGHER EDUCATION

April 2, 1992



Scott Seacat
Legislative Auditor
State Capitol
Helena, MT 59620

Dear Mr. Seacat:

The University System concurs with the recommendation contained in the Photocopy Machine Procurement Performance Audit Report which states:

Recommendation #1

We recommend the Department of Administration work with the university system to establish photocopier cost per copy contracts in Bozeman, Missoula, and Billings, if cost effective.

The University System will work with the Department of Administration to make cost per copy photocopier contracts an option for campus departments. Many departments are unable to accumulate sufficient funds to replace or purchase photocopiers. The cost per copy option, then, would allow departments to purchase machines which fully satisfy their copy requirements; something an outright purchase may preclude.

The cost savings cited in the report are estimates only. Only historical cost was considered, ignoring current photocopier replacement costs and the salvage value component. While the University System believes cost savings are possible, many factors must be considered, not the least of which is the administrative component. The University System is sensitive to charges of being administratively top-heavy. The analysis, coordination, and billing of cost per copy contracts would certainly carry an administrative cost.

The Legislative Audit staff has done a commendable job in preparing this photocopier performance audit report. The University System believes in the merits of the photocopier cost per copy contracts and will work with the Department of Administration to provide this option to campus departments in a reasonable time frame as resources allow and information is provided.

Sincerely,

Laurie O. Neils
Director of Budget and Accounting

c: John Hutchinson
Jim Isch
Jim Todd

